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ABSTRACT

This study investigated the tacit knowledge of highly productive and influential scholars in educational administration. Tacit knowledge is personal knowledge so thoroughly grounded in experience that it cannot be fully expressed. Some researchers suggest it is a marker of practical intelligence. Individual, indepth, semistructured interviews were conducted with 16 leading scholars identified in an earlier Productive Scholars Study. Survey results were coded, and data sorted and refined, so patterns both unique to individual scholars and across the sample population would be revealed. Results show that successful scholars are connected by their ability to create partnerships with others for social support and professional challenge and stimulation. They commonly looked for people with similar interests and compatible personalities. Other factors for success include the ability to prioritize projects, to organize time so they would not be run ragged, to work successfully through the demands inherent in being part of an academic institution, to negotiate politics at the university and in the field, to set a research agenda, and to persevere in overcoming obstacles. In understanding how tacit knowledge works for prolific scholars, researchers in educational administration may be able to improve their own academic output, both quantitatively and qualitatively. (Contains 21 references.) (RT)

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The Tacit Knowledge of Highly Productive Professors of Educational Administration

Presented at the Annual Meeting of the American Educational Research Association New Orleans, April, 2002

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This study investigates the tacit knowledge of highly productive and influential scholars in educational administration. The study is a direct outgrowth of the work conducted by Division A's Task Force of Research and Inquiry in Educational Administration. It builds on the findings of the earlier Productive Scholars Study (Tschannen-Moran, Firestone, Johnson, & Hoy, 2000). The study uses interview data collected in the Productive Scholars Study as well as data from additional interviews conducted with productive scholars identified in the earlier study. A tacit knowledge framework provides the conceptual lens through which we consider what makes these productive scholars stand apart. It is hoped that greater understanding of the tacit knowledge of productive researchers will lead to strategies that could be adopted by others as well as recommendations on the preparation of future researchers in the area of educational administration.

Background

The Task Force on Research and Inquiry in Educational Administration was formed within Division A of the American Educational Research Association to address the issue of how to improve the research base and knowledge production in the field. The Task Force reported its findings at a symposium at the annual meeting of AERA in April 2000 and published the final reports of its four committees in a special issue of *Educational Administration Quarterly* in the summer of 2000. One of the subcommittees focused on what could be learned about high quality

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research and scholarship from the careers of productive and influential scholars. The Productive Scholars Study attempted to identify prolific scholars in the field and explore the factors that contributed to their productivity.

The sample of productive and influential scholars was identified in the Productive Scholars Study through a three-stage process. First, the Productive Scholars Committee generated a frequency count of authors who had published articles and books on school administration in leading educational journals and publishing houses. The committee then asked a panel of experts consisting of past presidents of UCEA and past vice presidents of Division A in AERA to review the results of this analysis and refine the list. Based on those recommendations the Productive Scholars Committee selected a final sample of 50 productive scholars.

The Productive Scholars Study utilized several sources of data. One comprehensive set of data came from a seven-page survey consisting of 125 multiple choice questions and 13 short answer responses. Participants included 42 productive scholars and 87 scholars from a random sample of scholars in the field of educational administration who completed the surveys. Forty-two of the productive scholars returned curriculum vitae, along with 60 from the random sample.

Another significant source of data was interview data from 16 of the productive scholars. Although this interview data was rich with meaningful insights into what made these scholars tick, there was inadequate time or space to do justice to these findings in the final report. Therefore, the study reported in this paper makes use of and expands upon the interview data from the original study, providing a qualitative analysis that could not be accommodated in the earlier work.

Findings from the Productive Scholars Study

The most striking finding in the Productive Scholars Study was the similarity between external contexts of the productive and typical scholars in educational administration (Tschannen-Moran, Firestone, Johnson, & Hoy, 2000). There were conspicuous similarities between the productive and typical samples in the institutional demands and supports they

encountered, such as teaching and advising loads, the number of committees they were expected to sit on and the amount of time spent in service. Both groups complained about having too much committee work, and that they did not have enough time to fulfill all of their expected job responsibilities.

What differentiated productive scholars from their peers in this study were normative patterns, suggesting that they concentrated more of their effort on research and worked very hard to be productive (Tschannen-Moran, Firestone, Johnson, & Hoy, 2000). The data suggest that the productives had a more "cosmopolitan" orientation (Gouldner, 1958) in that they were more likely to be oriented around the theoretical literature. They more often collaborated in research, often with colleagues outside their university. Their career hopes were to make a difference or a lasting contribution through their research. The typical scholars, on the other hand, seemed to have a more local and practice-based orientation. Their research was more influenced by issues from the field. They were much likely than productives to see teaching and training future practitioners as their most important professional obligation.

Where did the productives acquire the appreciation of the aesthetics of research as well as the skills and motivation to engage in sustained prolific scholarly output over the course of their careers? Some differences in motivation were undoubtedly due to personality factors, but evidence was found to suggest that it was also related to the development of tacit knowledge structures among the productives. The productive scholars had the opportunity to learn research skills during graduate school by working closely with an experienced researcher or mentor as a research assistant or part of a research team. In these experiences, they apparently came not only to value research, but also to understand it well enough to orchestrate the complex process of problem finding, designing and conducting a study, writing up the results and shepherding the written product through the refereeing process. These experiences allowed the productive scholars to have early success in publishing in refereed journals and contributed to a greater sense of efficacy.

Participants at the Task Force Symposium at AERA were intrigued by the study's findings and encouraged the researchers to delve more deeply into the interview data. The current study, Tacit Knowledge of Highly Productive Scholars of Educational Administration, builds on the findings of the earlier Productive Scholars Study, making use of the interview data collected in that study. It also utilizes additional interviews conducted with some of the productive scholars identified in the earlier study. The current study focuses on developing a better understanding of the tacit knowledge of the productive scholars.

Theoretical Framework

Tacit knowledge is personal knowledge so thoroughly grounded in experience that it cannot be fully expressed (Horvath et al, 1999). According to Horvath et al. (1994), tacit knowledge allows a person to know when to adapt to the environment, when to shape the environment, and when to select a new one. Horvath and his colleagues further indicate that tacit knowledge has three broad, characteristic features: it is procedural in structure, relevant to goal attainment, and acquired with minimal help from others.

Wagner and Sternberg (1985, 1986) suggest that tacit knowledge is a marker of practical intelligence. In other words, they argue that practical intelligence manifests as tacit knowledge. Practical intelligence has been called "common sense" (Sternberg, 1985) and "street smarts" (Horvath et al, 1994). The practical abilities are used to navigate successfully through everyday life. They include interpersonal and supervisory skills, self knowledge, insight into the actions and behaviors that lead to goal achievement, and the ability to solve practical problems and to shape environments that impede success (Sternberg, 1985). In short, "practical intelligence...involves the ability to grasp, understand, and solve real life problems in the everyday jungle of life... you can't be successful if you lack practical intelligence" (Sternberg, in Miele, 1995, on line). Tacit knowledge, then, points to the presence of practical intelligence.

Bereiter and Scalamandria (1993) posit that tacit knowledge – the invisible knowledge hidden behind intelligent action – is highly developed in experts. However, while tacit knowledge increases with job experience, it is not a direct function of that experience. In other words, the amount of experience one has is less important than what is done with that experience to acquire knowledge, solve the complex problems of practice, and achieve goals (Leithwood & Steinbach, 1995; Wagner, 1987). There are those with long years of service who do not evidence high levels of expertise, and those with shorter tenure who clearly have gleaned more form their experiences.

The context of tacit knowledge is also an important consideration for real world accomplishment (Wagner, 1987). Context can be considered as local, referring to a focus on short-term, more immediate goals, or as global, referring to long-term goals, and focusing on how the current situation fits into a larger framework. These delineations of context are a reminder of Neisser's (1976) statements that intelligent performance consists of "responding appropriately in terms of one's long-range and short-range goals, given the actual facts of the situation as one discovers them" (p. 137).

Methodology

The methodology of this qualitative study differs from many others in the manner in which the data is coded and analyzed. The technique has been adapted from others examining tacit knowledge and is designed to capture the implicit goals and practical intelligence of participants (see, for example, Horvath et al., 1994; Nestor-Baker & Hoy, 2001).

Data Sources

Individual, in-depth, semi-structured interviews with 16 of the identified leading scholars were conducted as part of the earlier Productive Scholars Study. Approximately 400 pages of

interview transcripts existed from these interviews. That initial interview data was supplemented by four interviews conducted with scholars from the original sample in order to provide additional understanding of the existing data.

The conduct of the additional interviews followed guidelines adapted from Nestor-Baker and Hoy (2001). Interview probes were based on a combination of Flanagan's critical-incident technique (1954) and Dervin's Sense-making methodology (Huesca & Dervin, 1996) and drew extensively from Horvath et al.'s (1994) protocol used in mapping tacit knowledge in the military. The interviews sought to focus not only on the steps taken by the productive scholar but also on the rationale constructed by the scholar in making sense of occurrences. It is in this reasoning that the development of tacit knowledge may reside.

Questions explored the factors scholars perceive have contributed to their productivity, the elements of their preparation and training they felt were most important, the relationships that have been important to them in their careers, their career highlights, as well as the impact of demographic characteristics. Participants were asked to talk about incidents in their professional lives that shaped their understanding and practice of scholarship, to recall specific situations and to identify elements that they considered critical to success or failure. In order to focus on the learning that goes on behind proceduralized behaviors (Cattell, 1971; Cooper and Sawaf, 1996; Morgan, 1986), the interviewees were encouraged to consider such issues as the barriers they faced, the way they did or did not surmount those barriers, and the impact of their decisions on later actions.

This type of interview is not tightly scripted. A firm protocol would orient the interview too closely to preconceived ideas of the researchers. The nondirective format allows the

participant the greatest level of freedom in determining the material covered in the course of the interview.

Coding of Tacit Knowledge

Two research assistants, trained by the primary researchers, assisted in coding the data. Instances in the 20 interviews that pointed to tacit knowledge were coded as "if-then-because" statements, with the "if" portion representing the antecedent condition(s), the "then" portion representing the action(s) growing from the antecedent condition, and the "because" statement explaining the reason for the action. The if-then-because scenarios serve to illuminate goal differences, even in cases where the procedural action is similar. This format is effective in the delineation of tacit knowledge (see Nestor-Baker, in press; Nestor-Baker & Hoy, 2001). However, it should not be mistaken as a strict representation of tacit knowledge. Rather, the comments of the scholars and the if-then-because scenarios created from those comments serve as markers, or pointers toward embedded tacit knowledge (Sternberg & Horvath, 1999). The if-then-because coding process was developed and refined by Horvath et al. (1994) and complements Leithwood and Steinbach's (1995) discussion of solution processes, the mental blueprints that provide guidelines for performing certain actions.

Ferreting out the tacit knowledge embedded in the interviews required painstaking attention to the procedural, goal-oriented characteristics of tacit knowledge. The coders attempted to avoid declarative knowledge, or maxims, and to focus on procedural knowledge, in line with Horvath et al.'s indications that tacit knowledge is procedural in structure, relevant to goal attainment, and acquired with minimal help from others (1994).

Data coding was a two-step process. In the first step, the two research assistants, working independently of each other, read the interviews and drew up independent codings. However,

because of the implicit nature of tacit knowledge and because of the lack of professorial experience on the part of the assistants, a second tier was added to the coding process. After the independent codings, the assistants and the two primary researchers convened to consider the delineations of tacit knowledge. This permitted continuing discussion of tacit knowledge and provided an avenue for checking the assistants' understanding of the scholars' comments. In order to ascertain whether the second safeguard tier was needed, interrater reliability of the independent codings was calculated using agreement on presence (Boyatzis, 1998). In this way of calculating interrater reliability,

> There is the assumption that coding a theme as present is more important than coding a theme as absent. This may occur because the phenomenon of interest only makes theoretical sense when it occurs...or there is not an equal likelihood of observing presence and absence (p. 155).

Agreement was based on whether the raters saw tacit knowledge in the same places, in the same stories and discussions, within the interview transcripts. Because tacit knowledge may not be clearly verbalized, exact wording by the raters of the tacit knowledge was not expected. Rather, agreement was based on whether the raters assented that tacit knowledge was, indeed, present in specific areas of the interviews. Across the independently coded interviews, and without any adjustments for any issues of clarification, an interrater reliability of 64% was achieved, using the following formula.

$$\frac{2 \times (\text{no. of times both Coder A and Coder B saw it present})}{(\text{no. of times Coder A saw it present} + \text{no. of times Coder B saw it present})}$$

The second phase of coding, which consisted of group discussion of the tacit knowledge areas and items assisted extensively in refining the coded statements and resulted in codes acceptable to all involved in the coding process.

Tacit knowledge has an implicit fullness that may be implied through interviewee comments. Because of this fullness, there exists the likelihood that the areas of tacit knowledge delineated through the coding process may have multiple interpretations or foci. This

multidimensionality underscores the importance of using multiple coders, providing multiple levels of coding, and distilling the pertinent passages into if-then-because statements.

Sorting of Data

Through the coding process, 244 areas of tacit knowledge were identified from the interviews, resulting in 431 if-then-because tacit knowledge items. The data coding illuminated areas where tacit knowledge was found in the interviews. As suggested above, it is possible that coded statements arising from the same passages are similar in some ways but may have a different slant in another way. That is, while the coders may agree on the presence of tacit knowledge, it is possible that the wording used by the coders in the if-then-because statements may differ because of coder interpretation of the interviewee's comments.

With this in mind, the additional level of refinement provided by the sorting of the coded data resulted in a clearer pinpointing of the nuances in the coded areas. If the tacit knowledge areas alone had been used as the sort criteria, the stage would have been set for a broader, less defined analysis of the data. Instead, the if-then-because statements arising from the tacit knowledge areas formed the basis for the data sort.

A two-level sort of the if-then-because items was done by the two primary researchers. Each researcher performed an independent sort of the items, placing them in categories of her own creation and choice. Even though acting independently, the sorters arrived at a number of similar categories, such as collaboration, political skills, organizational contexts, research-to-practice, and self-knowledge.

Following this, the primary researchers used the independent sortings to perform a consensus sort on the categories. In this step, the independently selected categories were

compared for overlap, consistency, and disagreement. The consensus sort resulted in the categories seen in Table 1.

Utilizing the independent sort as a first step provides a better sample of the available sort criteria than a sort performed by consensus alone. The categories, the nature of the items of which they are composed, and the frequency of those items provide a platform for consideration of the tacit knowledge content utilized by the highly productive scholars. The results reveal intriguing patterns of similarity across scholars, as well as distinctive themes unique to individual scholars.

Category	# of Coded Items (with duplications)	% of Total Coded items (n=431; no category duplications)	# of Scholars Represented
Collaboration and Social Support	62	14.4	16
Coping with Competing Demands	61	14.2	14
Navigating Institutional Context	56	13	12
Political Skills to Gain Access to Resources and Power	49	11.4	13
Setting a Research Agenda	45	10.4	14
Research to Practice Connections	44	10.2	12
Connecting to Your Passion/ Knowing Yourself / Satisfaction	35	8.1	12
Perseverance in Overcoming Obstacles/Self-Efficacy/Confidence	23	5.3	14
Writing Skills/ Writing Process	19	4.4	9
Publishing and Coping with Peer Review	17	3.9	8
Setting Goals/Maintaining Focus	16	3.7	5
Standards of Rigor	14	3.2	6

Table 1. Tacit knowledge categories and dispersal of tacit knowledge items across categories.
Total areas where tacit knowledge was found: 244
Total tacit knowledge items found in those areas: 431
Total tacit knowledge items including duplicate categorizations: 441

Results

The results of the data analysis reveal rich reservoirs of tacit knowledge that had made these scholars so successful. Below, salient points within each category and representative samples of interview data are shared.

Collaboration and Social Support

Representing slightly more than 14% of the total tacit knowledge text units, Collaboration and Social Support involves the creation and maintenance of social networks within the context of academic productivity. Its importance is underscored by the fact that this is the only category containing tacit knowledge items from all 16 scholars.

These successful scholars are connected by their ability to create partnerships with others for social support and for professional challenge and stimulation. As young scholars, many of the scholars intentionally sought out relationships with others who had skills that they lacked. The practice continued throughout their careers as they sought out people with similar interests for collaboration, as can be seen in these comments.

> Finding people who stimulate you and who are exciting to work with, who stretch your mind [is important]. I don't care whether they're at home or someplace else. If they make me think, then I try and figure out a research project to do with them.

These partnerships often last over many years, providing emotional strength, academic support, and creative synergy. One scholar described the early years of an ongoing relationship that resulted in long-reaching opportunities for personal and professional growth.

> He could have done it by himself. He didn't have to involve a novice colleague, he didn't have to share the opportunity. He chose to, and I'm grateful that he did, I think we both enjoyed the fact that he did....we were very good together, we were very synergistic. And it would have been a much smaller scale project and I think probably not as well done if one or the other of us had done it. That we did it together allowed it to be more extensive in scope, and more robust.

In addition to working with peers in the field, several scholars mentioned the importance of having funding to support graduate students. These graduate students could be an important part of the networks that fueled the scholars' research agendas and motivation.

> Obviously you work hard or you are not productive, but beyond that I think that probably the most important thing is having extremely good colleagues and being able to get somebody to support my research so I am able to have graduate students who work with me. Because I am most productive when working in an environment with colleagues.

The findings in this study reinforced what was found in the quantitative phase of the productive scholars study, that the prolific scholars tended to be more cosmopolitan in their orientation, with greater emphasis on theory, and with the broader field beyond their own institution as their reference group (Gouldner, 1958, Tschannen-Moran, et. al, 2000).

> If you look at my vitae, a lot of my stuff is collaborative work. But very little of it is with the collaboration of somebody who is at my own institution.... I couldn't work just by myself; I wouldn't find that as enjoyable. But I don't need to find that in my department. I need it but I don't need to find it in my department.

The scholars were selective in who they included in their networks. They looked for people with similar interests, but also compatible personalities. The interviewees pointed out the need for collaborators to have similar work ethics and the skills to resolve the conflicts that emerged, such as the order of the authors' names on manuscripts or differences of opinion over methods or interpretations. Some intentionally sought out people who they knew would challenge them, such as the scholar below,

> I just look for people who are really capable and good at what they do, from whom I get a sense of real integrity. The other stuff I figure I can work out. You know, if they're gruff, or look down their nose, I don't have a problem with that as long as they're up front and as a consequence, I've never born the brunt of the sort of the impatience...the really harshly critical treatment...even though some of these people have that reputation. ... And people who are kind of challenging...I'm kind of drawn to that...because I know they'll push me. ... They're not lazy, so they won't be lazy about pushing me.

One scholar has stayed in touch with her cohort from graduate school throughout her career. This turned into an important source of both support and motivation.

> It's been a very supportive group and when you're real new, at least I did, I felt like I don't want to share my writing with experienced people because "What will they think of me?" And I don't want to take up their time. There are all those insecurities about not doing that. Having this cohort that's in the same place you are -- we were all brand new assistant professors. Maybe it's an unusual cohort, but they were just a very highly motivated group. So it really has been a very important support group.

A healthy kind of competitiveness emerged within that group, spurring the participants to higher levels of performance. In fact, several of the productive scholars talked about the role that friendly competition played in their motivation. Sometimes the competition was within their department, and sometimes it was within their network of colleagues beyond their university. None told stories of when this competition had gotten out of hand or been destructive. All related positive tales of satisfying relationships and improved performance.

Even though all scholars discussed collaborating in some way, there was no single model for these partnerships. From graduate school cohorts to mentorships to like-minded colleague groups, networks were dictated by need and personal desire, as illustrated by these words.

> What I discovered I like is being in a situation where I'm kind of lead person, but there's a small team, and we're working together, and I've been able to replicate that at [each institution where I've been employed]. That seems to work for me -- to have a bunch of people working together with me being more equal than anyone else...and so I'm not a lone wolf, but it's not like these elaborate collaborative projects [that others prefer].

Collaboration sometimes meant having access to opportunities that might otherwise have been missed. And there were times that the collaborative relationships moved the scholars to take on more than they might have alone, and then to work hard to come through.

> What those relationships do is they create opportunities that you might not have had yourself. They sometimes extend your work in ways that you might not have thought about yourself. And they sometimes push you to do a little bit more than you might have done otherwise, you know because when one of them asks me about writing something, I always do it. But it's not something I would have gotten around to otherwise. So that's

> helpful. … Your network out there is a source of motivation; it's a source of standards for you. If you're going to write something that's part of a larger piece for colleagues whom you really admire, there's no question about doing your best work. They are probably the people whose judgment you value more than anybody else's.

The sentiment of not wanting to let down a valued colleague was shared by several of the scholars. Several said that they did their best work in these contexts in order to not let down someone they admired. The scholars interviewed were careful to make sure that they brought valuable skills to these partnerships. They were careful to pull their own weight, knowing that failure to do so would mean they would not be invited to collaborate again in the future.

One final attribute that scholars looked for in a collaborating partner was generosity. A reputation of graciousness seemed to be attached to many of the leading scholars in the field.

> The people that I've worked with that I've enjoyed working with most have a huge generosity of spirit around their research. They are always willing to give an idea away because they know they're going to have another one. So if it's more useful to somebody else right now -- Take it! You know, it's not as if there isn't gonna be something else coming up right behind it.

Whether as sounding boards, collaborators, friendly competitors, or emotional supports, the networks created and sustained by these productive scholars appear to have a prominent place of importance in the structure of their careers and the development of their productivity.

Coping with Competing Demands

Coming in a remarkably close second is the category of Coping with Competing Demands. Differing from the level of the previous category by just one text item, this category comprises slightly more than 14% of the tacit knowledge items and contained tacit knowledge items from 14 of the 16 productive scholars. The tacit knowledge items in this category related to finding constructive means of coping with the many competing demands of the professoriate. What came through strongly in both the surveys and the interview data was that the job demands

placed on professors in this field are intense and that professors need a strategy to keep from being run ragged. Repeatedly, the scholars pointed out the need to know oneself and "to thine own self be true." This helped the scholars prioritize the many competing demands, both personal and professional, that contended for their time.

As a life maxim, "knowing oneself" may seem to make good intuitive sense. But how did these productive scholars put this into action? One strategy used by several scholars was to sharpen their particular focus into an area of expertise, as can be seen in the words of this individual.

> I came to recognize later that you can be more productive and you can be less stressed if you have a harmonious life. And so another spin off of my interest in stress was that I read a number of studies that pointed to the fact that people who were expert on a particular topic experienced dramatically less stress than generalists. And so I thought, Oh, I'll try that one out! So that's when I began to do two things in my career that I had not done previously. That first one was basically to look at my research as a program that would last for a period of six or seven years, in which I would try to become really expert on that topic. When you are kind of breaking new ground, then you get the feeling you're on top of something because you're basically studying and thinking about something other people aren't studying and thinking about. And I did find that my stress level went down. That was reinforced by the fact that I would try to bring my teaching and my research together.

The strategy of capitalizing on the ways that teaching, research, and service can play off and energize one another was frequently mentioned by the scholars. One scholar reported that,

> Good lively students give you energy and they give you insight. I learn a lot from my students and I shall always be grateful for the growth in me that has occurred because of my students.

Another commented on how interacting with students could stimulate good research,

> There is a symbiotic relationship between your scholarship and your teaching. One of the reasons I like to teach is because I get great ideas from my students as I teach. It's not that the students have good ideas -- sometimes they do, sometimes they don't. But what happens, in the context of the classroom is they ask questions and what that does is triggers your own thinking and it makes you ask yourself interesting questions.

Not only can teaching and research support one another, service can work hand-in hand with both as well. But one scholar was careful to define just what kind of service was appropriate,

> I think that teaching, research and service can be complimentary. I do a better job of teaching when I'm engaged in scholarship because I'm more alive. My mind is working better. Ideas that happen when you're teaching can shape and catalyze research. ...And one of the ways you serve is to provide solid information on important issues. I know lots of people run around and "consult." I get nervous about that....I think as long as your service is closely tethered to research, then you have a unique opportunity to provide and perform public service....Colleges of education have forgotten that their primary contribution is in disciplined inquiry and the use of disciplined inquiry to prepare people for educated roles. We are not the Bureau of School Services; we are not Dial 1-800 Expert! ...Colleges of education have misguided notions of what it means to be relevant, about what the basis of our relevance would be. We're confusing a whole lot of busy activity with meaningful commitment to educational reform. The more they run around with busy activities, the less they will be able to do the kind of careful analytic work to really understand what's going on, and what might be done differently, let alone what might be done better.

Several scholars warned against the lure of the money to be made from consulting, losing focus and not investing the time and effort needed to stay intellectually active.

> I never fell into what I think is a trap -- a consulting trap...You don't have time to work with your graduate students, or you don't have time to prepare for your classes the way you should, you don't have time to really engage in thoughtful analysis of what you want to study for the next five years....You can get bought by the money thing. One danger professors have is getting involved in the consultation stuff -- spending all your time making money. This contemporary of mine...his thing was consulting. He consulted and I studied and at the end of ten years, he was still an assistant professor and I was a full professor. Then at fifteen years he finally made associate professor. At the end of his career, after twenty-five years, ... he was still an associate professor.

Learning to maintain a calm demeanor in the midst of so many competing demands is an area of tacit knowledge that has taken several of the scholars most of their careers to master. Yet, once they were able to clarify their priorities, their lives became less stressed.

> In that quest to get that reputation and that visibility, there's a great danger that people will lose sight of the things that really matter, and that they are being driven by external rather than by internal forces. For most of my life, at least I'd say the last 30 or 35 years of it, I articulated for myself a very clear set of priorities against which I judge and respond to every request. Some people refer to me as Dr. No. But my priorities are

> basically my family first, and my teaching and my students are second. My research and publication are third, and my own health and well-being are fourth. And so when people are faced with invitations and decisions, should I do this or should I do that, they kind of look at only one side of the equation, and what they give rather than what they will give up. Every time you make a choice, it's a moral act whether you think of it as a moral act or not. You have to [ask] "What am I sacrificing when I make this choice?" So what I have tried to do is to keep those priorities always uppermost in my mind. And if I get an invitation, I view it against those four priorities....You're looking at Dr. No.

For one scholar, it took a significant health crisis to distill priorities. But the gift of the aftermath of that shock was a greater sense of centeredness and peace.

> There are so many distractions and pressures to pull you off, and there's a sense of a sort of panic and everything is a crisis. And you have to respond here and you have to do this and you have to do that. One of the things ... I've gotten better at, is not jumping so hard, so fast. Letting all of that sort of be treated as a noise. And you know what, the institution is still there. The sun still comes up. All that noise, the frenetic panic, doesn't have to be so crazy.

These scholars recognized that the role of being a professor of educational administration is a complex one. It takes a clear set of priorities to be able to manage the various demands. Or, as one scholar said, "If you don't watch it you can really do yourself in...if you do not learn how to say no to some people, you will not be here to say yes to anybody."

Navigating Institutional Context

With 13% of the tacit knowledge items, arising from 12 of the 16 scholars, navigating Institutional Contexts is a category that deals with the scholars abilities to move successfully through the demands inherent in being part of an academic institution. For the scholars whose tacit knowledge is represented here, the development of these skills began early in their professional lives.

Many universities try to protect junior faculty from the demands of committee work for the first year. Even where that wasn't the case, the productive scholars learned to prioritize their

time and to say no to demands that did not fit their priorities. Sometimes there were norms in their institutional settings that were counter to their development as a scholar.

> One of the things that was very clear here and at [my former university] is that the institution communicated a lot of ways that scholarship was not a collective commodity. That scholarship was a selfish act on your part. That you're doing your work for you so that you can advance, you can have stature, and you can have prestige as opposed to people are doing collective good when they are involved in scholarship. And obviously nobody came out and said it in the form that I'm describing, but that was clearly the message. Even in every day language like, "Oh so you're going to go do *your* work."

Finding a fit between personal goals and the goals and norms of the scholars' institutional homes was an important area of tacit knowledge. At times this required scholars to recognize that they were not in a good match, and that they needed to find their way to another setting. In at least one case, the departure was not voluntary. However, the person involved in that instance came to feel grateful for that event. It might be said that the scholar learned to make the appropriate adaptations of a practically intelligent person.

Several interviewees commented on negative environments they suffered as young scholars. However, they used those situations to develop their knowledge bases and prepare for different opportunities.

> The first place that I taught was a horrendous institution. The quality was very poor. The support for the collegial or any kind of support for research was zero despite the fact that ostensibly they thought that that was very high priority -- particularly because at that particular time they were under review by the state education department and commission for output, for productivity of their faculty, so it was a very high priority. But there was nothing to support that.... Within that environment, I was incredibly productive. ...The one thing they did give me was time. I mean all the faculty at that institution had lots of time because you taught evening classes and there weren't very many meetings or committees to serve on so -- other than dissertation committees. But nobody really spent a lot of time there during the day. People typically showed up, if they showed up, at three in the afternoon for a few hours before their evening class and then taught their evening class and went home. So I had all the time in the world to work. But, if I wasn't highly motivated, I wouldn't have done squat. I would have gone to baseball games.

Or, as this scholar said,

> My first institution that I was at…in some ways I was kind of a misfit in that department. I didn't fit as well. Values and priorities. But even from the first experience …it had some dysfunctional dynamics and politics.…I nonetheless learned a lot. A lot about doing research, a lot about writing, a lot about departmental politics. And it helped shape what I believe and don't believe. It really forced me to understand what it was that I really stood for and believed. What I would characterize as not a great situation…for me…I feel like I grew from that.

Those who left places where there was a negative climate or just a bad fit, were glad to find themselves in more conducive environments. Several commented that if they had stayed at their first institution, they would not have remained in the field. However, not all of the scholars had negative first experiences. There are several who look back at their initial experiences, and the learning that occurred there, with gratitude, as the following set of comments suggest.

> I remember when I had the offer from [my first institution], some of my cohort, the professors, other folks said to me…well that's a good place for you to start your career. And I said, what do you mean? And they said, it's a research institution, so you'll get sufficient support, but it's not a place of such visibility that the pressure is going to be hammering you, where you'll be sitting in the shadow of all these superstars. You can carve your own niche…At that time, in the early 80's it was very local orientation…There was enough support so I had the sense that I wouldn't be overwhelmed. But, on the other hand, that I would have sufficient support and encouragement -- and then I leapt into it.

Navigating institutional contexts involves more than just the reconciliation of negative organizational fit issues. It also involves understanding and acting within the norms of academic life. It involves the capacity to select, adapt, and change one's environment.

Political Skills to Gain Access to Resources and Power

Knowing how to negotiate the politics at their universities and in the field in general was an important area of tacit knowledge for these scholars. Thirteen of the 16 scholars evidenced tacit knowledge in this area, with tacit knowledge items in this category accounting for 11.4% of the total.

Some found that it was important to identify the people who had power and to cultivate positive relationships with those people in order to generate resources or to maintain positive relationships. One scholar spoke of the effective use of information in building relationships.

> I was working on a book on school finance...When we got to the end, I knew that we wanted to try to share what we were finding with people in state government. [My colleague] had a connection in the treasury department...I had talked to other people about doing press release conferences and she said, "No. If you want to influence people, you need to figure out who the right people to talk to are." We made an appointment with someone in the treasury -- someone in the dept. of education -- so she kind of modeled the idea of setting up appointments, giving them a briefing, and I then took that over on the project we're doing now.... And we're having a much more positive relationship with the [state] Dept. of Education, knowing that if we're going to put a briefing out, we'd better talk to them first, so they know its coming and can be prepared if they start getting calls --and figuring out who to call.

Gender issues related to political skills and political games arose in some of the scholars comments. Some participants spoke of the lessons they had learned about dealing with gender oriented power structures. However, these scholars do not necessarily have the same feelings, as evidenced by these comments from two women scholars.

> I remember being in one of these UCEA graduate student seminars and there was all this man-bashing going on about this field being dominated by all these white men and a lot of bashing going on. It was beyond the critical issues about representation and perspective and voice and all that, it was man-bashing...You know, get a reality check here. Those are the people in power who can help you. And guess what, they are some of the people with the biggest hearts who wish to help you too...not everybody has to be pigeon holed. Thank God some people defy the stereotypes.

> [The male chair] would call a meeting and wouldn't have an agenda and wouldn't define the issues and so [a female professor] would sit there. And say in her sweet way, "Do you think the issues are these?" In other words, she would define the issues and [the male chair] would say, that's a good idea, that's a good way of putting it. And then [the female professor] would say again, "Well, would you like me to write up what I just said and the points of our discussion and maybe some recommendations?" "Oh that would be good." And so she'd stay up past midnight and do this. And I would say to her, "You damn fool. He's the chair, it's his job." And she'd just smile and say, "I want it to get done and I want it to get done well and I care about the program and so this is a way to have power." And I find myself doing that....I learned, but it's not fair, it's not right.

The successful use of political skills is often about resource generation, and about making transactions to meet the needs of self and employees, as the words of this scholar attest.

> Seemed like the amount of money was not going up and because of inflation was actually going down...I just got to a point, you know, I had a staff of a couple of people...I couldn't keep this all together -- wrote up what I was doing -- got that all done. And found myself in a situation where I didn't have the resources I wanted to have to support the kind of lifestyle I wanted to have...so I had to make a deal in order to get time to write some more grants... So it's always a balancing act trying to keep the system up. I feel like sometimes I take jobs to keep the system going.

When examined strategically, the give and take and wins and losses that occur in the political context provide lessons on balancing emotions and reactions.

> I see people who get so wound up in themselves -- their political work is a reflection of themselves as human beings. So that even if they perceive themselves as having won political contests -- the fact that they get so wrapped up in them that their self they think is on the line -- that troubles me. Because I see them twisting you know -- I see them emotionally getting all rung out about it. It's not a matter of a failure of them as a human being.

If political skills create such feelings, could these successful, productive individuals remove themselves from the need to be involved in politics? As one scholar opined,

> If you are so dang good, you are above reproach, everything you do is a national kind of thing, breakthroughs and stuff, yeh, you can do that and be Switzerland. But very few of us are like that...Again, you have to have a compass. You have to know what you stand for and where you're going and some general principles... you end up doing that by being yourself. You surround yourself, you talk to people...you seek out people that you think are first going to agree with your position, and you size up how much support there is, and once you get a pretty good idea of their support, then you...go to the other person, ...and you line up your support. You coalesce the group, you form a coalition. ... If you're going to be reasonably successful, I think [playing the political game] becomes a necessary thing. ... So what that means is I have to get along with people, I have to support people, I have to join other coalitions, I have to get people to join my coalitions. ... I don't think I ever compromised any of my basic principles, but you have to make compromises. You have to negotiate things.

The generation and use of political skills appears regularly in the interviewee's comments, suggesting that political understanding and high levels of productivity are not incompatible. Though some frustrations appeared, overall these scholars have seen the

possibilities for effective use of politics within the organizational context, have internalized the necessities of resource generation, and have retained the capacity to manage the emotions involved.

Setting a Research Agenda

The earlier study of productive scholars revealed that most scholars said that what most motivated them was to make a contribution or to make a difference. Some professors wanted to make a difference through their teaching and through the contributions of their students. The prolific scholars seemed to want to make this contribution through research and writing. This orientation is supported by the interview data. This category, Setting a Research Agenda, was represented in the interviews of 14 of the productive scholars, and accounts for slightly more than 10% of the total tacit knowledge items culled from the interviews.

Many found it productive to carve out a research agenda that could last up to a decade or more, rather than switching from topic to topic with each project. In answer to a question about how a research problem might emerge, one scholar described this process,

> Usually it's a kind of a slowly emerging set of questions, or things that I have put aside. I couldn't put a question to it but some kind of vague but nonetheless insistent kind of annoyance, irritation that I just couldn't articulate. And then in a conversation, listening to someone, it would connect up. That to me is the mystery of how these things happen. It for me just is both so exciting and mysterious. Sometimes these emerge into actual projects that I can get funding for. More often than not, they produce what I call op ed pieces for a general audience or scholarly articles that are really puzzles that I think I want to try to work out. Because I work out these answers through the writing. That's what gives so much satisfaction and excitement to the process is that I think I have a puzzle and a question and I start writing on it. I outline it and I start writing and it doesn't end up the way I started. That's the beauty of it!

The mysteriousness of the outcome is what engaged the imagination of several scholars.

> Whenever I tackle one of these projects, I never have any sense of where it's gonna end up. Whether it's gonna end up on the floor or whether it's going to end up in print. And that's the way it is with this one. But when I do this, when I'm passionate about something and

> I'm intellectually curious about something, and I think that I'm breaking new ground, then I say, I'm bound to enjoy the journey!

There was an abiding sense of adventure and curiosity, and even fun in the research process for many of the scholars.

> This is fun! This is a kick! This is really interesting. There's a fire in it. You've got a hold of something and you can't let it go until you get the riddle work done. If I can't understand, I don't know how to influence. If I can't wrap my head around it, then I'm not quite sure how to get my heart into it. So I have to be able to have some sense of what's happening and how I can think about things in order to figure out what I can do about them. So part of that fun and animation relates to the whole notion of human agency. It's tough and there are a lot of constraints and there are a lot of external pressures and it ain't easy, but there's human agency. It's the only way I know to hold on to some hope.

Even though the research process feeds these scholars, there is a thread through the interviews that suggests pressures felt by these productive individuals, as evidenced by the following comments.

> And institutions are pressing us now to not do the kind of long term careful work that is required in my judgment to really understand education purposes and processes....There are so many indirections and distractions and pressures to pull you off, and there's a sense of a sort of panic and everything is a crisis. And you have to respond here and you have to do this and you have to do that. What do we really know?

> I tend to get distracted by things that are timely. You know, with reform taking a different turn every few years. With topics sort of floating up to the top. Trying to stick with the theoretical thread...I think that's something that's tough...and a lot of people in our field find it tough. We are an applied field, and as a consequence -- whether people like it or not, recognize it or not, act on it or not -- in the field of practice and policy things come and go and we're sort of drawn to that. So there are real trade offs to that. Oh geeze, we need to attend to that, the principals are complaining, or there's this new approach to reform. Before your work has matured on the earlier one, you're moving on.

The interviews suggest that creating a successful research agenda requires an understanding of the interplay of personal passion with internal and external pressure. Sustaining the progress of that agenda requires an ability to remain focused and to avoid being seesawed by the clamors of others. Maintaining the necessary balance appears to be no small feat.

Research to Practice Connections

One of the things that set these scholars apart was their ability to meet the dual standards of rigor and relevance. This is exemplified by the tacit knowledge related to connecting research and practice. This category holds just over 10% of the total tacit knowledge items and was evidenced by 12 of the 16 productive scholars.

Meeting the standard of relevance took a concerted effort for many, and was something they valued highly. They were quick to note that as an applied field, educational administration cannot afford to become disconnected from the practice of schools. Several of these scholars kept their research grounded in the field by constructing structures through which they could interact on a regular basis with practitioners.

> I have a network of school people that I stay in contact with, sometimes informally, sometimes on a project basis. For example, for the last 10 or 12 years I've convened with some combination of principals and superintendents every six weeks for a half-day at the university. The reason for us coming together changes over the years but it's relatively informal actually. ...We meet and I give them the papers I'm writing to read and we talk about them. ... And I think there's a lot to be learned from listening to how it looks from their point of view. ... [As a result] we substantially changed an important part of our large school district. So [there is] a huge kind of cross benefit. That's a part of a motivation. I don't want to wait until I'm dead and gone before there are any effects. So that is a probably a lot to do with the kinds of topics I work on and the way I work too. I would like to see some impact. ... And I know that whatever I write will get seriously attended to by at least 15 or so people. And of the 15 probably half of them will actually do something very significant in their school as a consequence. And if it doesn't work, they'll tell me about it.

Another strategy that some of the scholars used to keep their work relevant to practitioners was to write to practitioner audiences by publishing in practitioner journals. Some noted that the discourse in scholarly journals can be inaccessible to practitioners, and so they felt an obligation to interpret their work for this different audience. Two of the scholars also mentioned writing Op-Ed pieces to bring current topics in education before mass audiences.

Connecting to your Passion/Satisfaction

Most of these prolific scholars were motivated to work hard by a clear set of underlying values. Tacit knowledge items related to personal passion/satisfaction account for approximately eight percent of the tacit knowledge items. Twelve of the scholars contributed items to this category. For some of the scholars, passion and satisfaction meant wanting to make schools a better place for kids and having a profound concern for the fate of children in failing schools. One noted,

> That was part of our reason for wanting to make a difference, was to think that kids shouldn't be left at the mercy of such inadequate schools and inadequately prepared educators.

Another scholar framed her research as an act of civic engagement,

> I see research as a form that one can do social justice. All of my research is focused on questions that I think would be helpful if we had the answers to moving us forward as I think about social justice.

A clarity of vision helped these scholars to connect with others who had similar interests. Many were enlivened by the pursuit of intellectual ideas. This focus helped sustain their motivation through the parts of the process that were tedious or just plain hard work.

> I know who I am. I know what I want to do. Through interpersonal skills, I've been able to attract really, really bright people who are interested in the same thing, that are interested in intellectual ideas. Scholarship and research really has two faces. One face is the creative face where you come up with new ideas. The other face is kind of the routine face where you push those ideas forward and you do the kind of routine steps that're necessary to test your ideas empirically and systematically. Some people do one and not the other…I try to do both.

Above all, most communicated a great deal of enjoyment in their work. Many saw it as a privilege to be paid to read and think. Intellectual curiosity stoked the fire of these scholars' motivation.

> So for me being a professor is like a full-time hobby for which I get paid. As far as I'm concerned what they pay me to do is to learn. So if you don't have high intrinsic

> motivation or another way of putting that is a high level of curiosity and love of learning -- I can't imagine … that you could be a productive scholar [otherwise]. … All the colleagues I have who are highly productive just don't look at it as their work as work.

This category is summed up effectively by the words of one of the participating scholars. With sheer delight, he expressed his sense of career fulfillment through these words:

> I can't think of a better job on the planet, short of playing shortstop for the Yankees. This is as good as it gets, I think. It's a great line of work. Great people, great opportunities. Actually try to do something, to have to use your mind. Ideas are important. On my best days, I think this is really cool!

Persevering in Overcoming Obstacles

With slightly more than 5% of the tacit knowledge items culled from the productive scholars interviews, Persevering in Overcoming Obstacles is not one of the largest categories of tacit knowledge. However, items falling into this category surfaced in the comments of 14 of the 16 scholars, suggesting that it is a subtle thread with extensive connections.

One scholar had the confidence early in his career to acknowledge his deficits in the area of research. He had the tacit knowledge to approach senior colleagues and to know how to engage them, where his peers did not find ways to tap into the vast resources at their disposal.

> I felt that I had a very strong substantive and theoretical background from [my graduate training]. But I had a very weak methodological background. And I knew that. So I decided that during the first few years of my career -- I made a conscious decision -- what I need to do is to acquire some methodological expertise that I don't have. Fill in the gaps. So what will I do? I'll learn by doing and so what I did was construct different research problems using different research designs and different methodologies. And then I would go seek out the faculty. Sit down and talk with them, and say "Now here's what I'm planning on doing, how would you think about this? ... And they were always willing to spend time with me. They'd just say, "Well, come on in and sit down and tell me what you're doing." I came in with a problem. I said, "Here is something that I'm interested in."… All of those resources were there for everybody; I was the only one who tapped them. if I hadn't been proactive, all of those resources were there for everybody. I was the only one who tapped them. I was the only one of the assistant professors who would go to them and seek their help. And what I found was a very eager and receptive audience. My sense is around here the same opportunities present themselves but people don't initiate it. So I think one of the things that I learned was to recognize what my limitations were, and

then to figure out how I could have an inservice program tailor made to myself by tapping the resources and the expertise of the senior faculty.

Many of the scholars came into this field after successful careers at another level of education. It was humbling to have to start all over at the novice level. Experiences in early career made a difference to the sense of efficacy that these scholars had for research.

> Early on [I was] exposed to really wonderful people. And to say "I can do this, I can play at this game."

It is not difficult to see connections between the perseverance described herein and the focus and dedication necessary for effective maintenance of a clear research agenda or the willingness to write and rewrite until the appropriate clarity is achieved. The scholars' interviews repeatedly showed sheer, dogged pursuit of what is necessary for productivity

The Writing Process

Learning to write and write well was part of these scholars' success. Though representing only 4.4% of the total items, tacit knowledge related to this category appeared in the comments of over half of the participating scholars, underlining the role that writing skill plays in productivity. Some scholars enjoyed the writing process, while others found it more painful.

> I love writing. I love doing research and I love getting paid to read, to think and to write. The act of writing is not something that intimidates me. Although I may not be that terrific at it, I enjoy it. It's not a painful process. Now at times it's hard of course, it's not all one smooth ride or pleasant. But overall it's something that I enjoy and I get a great deal of satisfaction from.

Not all of the scholars found writing rewarding. One admitted a distinct distaste for the process,

> I hate to write. So even though I publish, it isn't that I enjoy writing. I think writing is very hard and I don't enjoy it. It's hard work. If I had my choice with the way I would formulate my ideas and share them with the world, it would all be oral. I think I do my best analysis in some kind of conversation. That's what I like. But that isn't what's rewarded and so I, of course, write.

Most of the scholars interviewed acknowledged that the writing process was hard work that required setting aside uninterrupted time to be successful. Finding time for writing was a challenge in the midst of the other things that competed for these scholars' time. For some it meant there were certain days of the week when they did not go into the office, and for others, it was a certain time of day, such as early morning or late at night that they carved out for writing.

> I do most of my writing in big chunks. When I'm writing, I like to stay at home for a whole day. I can write in the evenings. I have to have at least three hours. I cannot write anything unless I have at least three hours. And I prefer to do that during the day and in a longer chunk.

Or, as another scholar advised,

> That's where putting yourself on a schedule [helps]-- whether it's every day or x days during the week -- these time slots. Or just set aside, take the phone off the hook, don't go into your email, turn off every thing and give yourself that time. That's crucial. I listen to other productive people and we'll talk about writing four days a week from x hour to x hour. I may write three pages, I may write a paragraph and delete it the next day. That's probably the toughest as you get more senior and take on more responsibility, like myself. I feel a sense of responsibility, duty to serving the community in which I work, not only the broader community, but the community within the university, the department -- it steals from your time and you need to reserve that. And probably it's good to do it in a structured, formalized, systematic way.

For some scholars, the rhythms of research and writing meant collecting data and literature during the academic year, but reserving time in the summer where they could think more deeply and write.

> When I'm on duty teaching -- you have to teach three out of four quarters -- I cannot do what I would call serious research and particularly the writing. Serious book writing I do when I'm not on duty or when I take a sabbatical. … I can do editing of manuscripts while I'm teaching, but I can't do the creative part, the actual first draft writing. I find that very hard to do when I'm teaching.

Though there were some differences in how the productive scholars addressed the need, it is clear that setting a disciplined schedule of writing proved to be among the areas of tacit knowledge to which many of the scholars in part attributed their success.

Publishing and Coping with Peer Review

Although none of the scholars interviewed said they really liked getting negative reviews of their work through the peer review process, several commented on how much they had come to value the process of peer review in improving their work. Their comments resulted in tacit knowledge items accounting for just under five percent of the tacit knowledge items. Strategies were mentioned for coping with the sting of reading a negative review, such as putting the piece away for a few days or weeks before they came back and began to address the concerns mentioned in the review. As they had moved through their careers, some said the amount of time they needed to let a piece "rest" after reading a review had gotten shorter.

> That is a way you promote scholarship, but you have to do it in a way where everybody is willing to manage their emotional reactions at having their work criticized. Sometimes you close the door, put it in the bottom drawer of your desk and pout for a day. Just make sure you know how long you intend to pout before you pull it out and try and respond.

Over the course of their careers, most of the productive scholars had come to value the process of criticism in improving their work. One told the story of a secretary who was dismayed by the tone of one review,

> One of the people that I learned a lot from was also one of the harshest reviewers of draft papers I've ever experienced. And I still remember his secretary coming into my office one day and said, "How are you doing?" "What do you mean, how am I doing?" She said, "Having a good day? You're okay today?" "Yeah, I'm okay today." And she said, "Well Dr. So and So asked me to type up these comments that he had made on your paper and give them to you because he's going to be out of town. So I've done it and I'm bringing them to you. And I just want you to know I think this is the meanest thing I have ever read in my life, and I'm really sorry, but I had to bring it." For her, the norm of her work life was kindness and supportiveness, and the norm that made my paper better was, "What does this mean and why is it here and not here, and did you do this." It was four pages long, single-spaced, and it was very rigorous and very helpful. I laughed and reminded her that our shared colleague had once said, "If it's so bad that there's no hope, then it isn't worth my time. So the more criticism you get from me, the more promise I think this piece has. You invest in helping good quality work get better."

Peer review is an entrenched part of academic life. The productive scholars have selected ways to deal rationally with the emotional ramifications of criticism, thus placing the process of peer review in a approproiately manageable context.

Setting Goals/ Maintaining Focus

Items specifically connected to setting goals and maintaining focus surfaced in approximately one-third of the interviews and accounted for nearly four percent of the tacit knowledge items. As much as the scholars reported enjoying the process of doing research, it still took force of will to find the time to make it happen. One said,

> The really critical thing is learning how to carve out time to focus on your own work. Whether it's reading stuff you need to read, time to write, or time to think. Thinking as you read, thinking as you write. Creating intellectual space. That's the toughest.

Repeated mentions were made of making use of the rhythms of conference proposal deadlines (such as UCEA and AERA) to design projects and then to provide the external deadline to get them done. By submitting proposals on work in its early stages, the prolific scholars created an urgency to bring the work to completion.

> When I do conference proposals, I invent papers that I want to write. Then I have to do it. So it's creating external pressure for yourself. I am sure I would not be nearly as productive [without that]. But once you get the first draft done, then it's not that difficult to get it prepped up for publication.

One of the scholars pointed out that focusing becomes a habit through the process of socialization in academe, saying,

> Everyone thinks once you get tenure things will be so much better…what they don't understand is that once they have held a gun to your head for seven years…they don't have to hold it anymore…they've taught you how to hold the gun yourself!

Standards of Rigor

The final category, Standards of Rigor accounts for approximately 3% of the tacit knowledge items culled from the scholars' interviews. Though proportionally small, it is a

category requiring emphasis. Those who reached a high level of success sought to learn and meet the standards of excellence demanded of scholarly work. They did that with the conviction that the work was important. One scholar had to persuade her colleague of this importance,

> [A colleague] kept saying to me, you don't need to count this, it's a waste of your time -- everybody knows this to be true. And I would say, yes but nobody's put it into writing. Until it's written you can't use it as tool. You can't fight with it. We know it's true, but until it's published, until it's in writing, you can't use it in the argument. We have to enter it into evidence.

And, with those words, we reach a fitting end of the discussion of this study's results. As their words have shown, the productive scholars have spent their careers engaged in rigorous efforts to find the tools and articulate the arguments necessary to advance the field of educational administration.

Implications

The highly productive scholars who participated in this study have given us a gift. By opening a window into their thinking and the ways that they approach their scholarship, they have given us clues to the tacit knowledge structures that make for success. By making this knowledge less tacit and more explicit, others may be able to apply these concepts as well. If other scholars in the field of educational administration can learn from the tacit knowledge of these productive scholars, it is likely that our research will improve -- to become both more rigorous and more relevant to improving schools.

These prolific scholars were motivated to work hard by a clear set on underlying values, of a profound concern for the fate of children in failing schools and wanting to make schools a better place for kids. These underlying values fueled their motivation to exercise the force of will necessary to find time for research in the midst of other competing demands, and to persist through the more tedious or arduous parts of the research process. They evidence high levels of

self-knowledge, self-regulation and self-efficacy. They had learned to manage not only their time but their emotions in coping with the pressures of academic life, the criticism inherent in the peer review process, and the politics of organizational life. Many of the scholars acknowledged that they had been fortunate in the opportunities that had come their way, but they had capitalized on those opportunities through hard work, persistence, and dedication.

One of the encouraging findings of this study is that "nice guys" *don't* finish last. These scholars' motivation was fueled by an enjoyment of working cooperatively with others. The best scholars were marked by a reputation for a generosity of spirit. They attracted others to join them in their pursuits, allowing them to dream bigger dreams, accomplish bigger projects and just to be more productive.

Significance

The purpose of this study was to examine the tacit knowledge of productive scholars to see what could be learned that might enhance the quality of research in the field as a whole. The importance of high quality research to the vitality of the field of educational administration cannot be overstated. Greater understanding of factors that facilitate high quality research will help structure environments that nurture research projects meeting the dual standards of relevance and rigor. Insight into the tacit knowledge of productive scholars gives us a window into the thinking of the most successful scholars in our field. It is a promising endeavor in the pursuit of this understanding.

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